FUNDING SHIPBOARD INVENTORIES

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by

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CHAPTER I

INTRODUCTION

The material readiness of the fleet is reported to be progressively deteriorating because of a growing shortage of repair parts and equipage, and to a lesser degree, consumable material aboard ship. These shortages are said to be the result of insufficient supplies and equipage funds to procure the required inventory to fill allowance and meet minimum levels of support established by the Fleet Commander.[1] This condition has also been emphasized by the Commander in Chief U.S. Pacific Fleet,[2] and the General Accounting Office.[3]

As an example of the nature and scope of this problem, the General Accounting Office reported:

> Our review disclosed that the preparedness of . . . individual Navy combat and service ships of the Atlantic and Pacific fleets was being seriously affected by their inability to obtain repair parts and other materiel required for combat readiness although such materiel was available in the stock fund inventory. We found that the immediate cause for this was the insufficiency of consumer funds needed by . . . ships to purchase this material from the stock funds. The inability to obtain the needed material significantly contributed to or was directly responsible for . . . ships being operated without certain essential material on board that would be needed in an emergency.[4]

Over the years various funding methods have been used to finance

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[1]U.S., Commander in Chief U.S. Atlantic Fleet, Letter serial 2936/41/440 of 30 August 1962.

[2]U.S., Commander in Chief U.S. Pacific Fleet, Letter serial 74/1067 of 26 March 1962.

[3]U.S., General Accounting Office, Report on Review of Stock Funds and Related Consumer Funds in the Department of Defense, Part II, December, 1962.

[4]Ibid., p. 9.

inventories of spare parts, equipage, and consumable material[5] aboard ship, but as evidenced by the recent concern of the fleet commanders and others, these methods have not provided adequate inventory levels. In recent years considerable time has been devoted to the study of this problem and several revised methods for funding shipboard inventories have been proposed.

These proposals, while varying in detail, may be summarized into three basic systems:

a. Continue present stock fund/consumer fund concept with stock fund financing extended to all ships with central storerooms.

b. Fund repair parts and other combat material through direct appropriations from Congress with subsequent management in an Appropriation Purchase Account.

c. Continue the present stock fund/consumer fund concept, modified by excluding certain categories of material from stock fund financing.

It is the objective of this study to:

a. Present the present system for funding shipboard inventories.

b. Identify the major problem areas and deficiencies of the present system.

c. Present the advantages and disadvantages of the proposed systems.

d. Present recommendations for consideration.

There is no evidence of any funding problem in maintaining adequate shipboard inventories of provisions and resale items, and they will not be considered within the scope of this study.

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[5]Note: The term material is more commonly used today and will be used in lieu of materiel, except when quoting from sources using the latter term.

CHAPTER II

CURRENT FUNDING SYSTEM

The Navy uses several methods for funding the various costs of operating ships of the active fleet; however, there are two basic systems used to finance inventories of material on the ships. The one most extensively used is a stock fund/consumer fund system[1] in which central inventories are initially procured under the Navy Stock Fund and are charged to consumer funds when issued to the ships. The other system is an appropriation/free issue system[2] in which central inventories are initially procured under general appropriations and issued free of charge to the ships.

In order fully to appreciate the significance of these two systems in the present funding pattern, it is necessary briefly to review the past history and development of the stock fund concept and to determine the source of stock funds and consumer funds.

Prior to about 1890, supplies required for naval use were procured by the various technical bureaus and financed from annual appropriations. Each technical bureau determined its own requirements, and performed its own purchasing, storing, accounting, and issuing functions. Laws enacted in 1890 and 1891 transferred the responsibility for purchase, storage, and issuance of

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[1]U.S., Department of Defense, Assistant Secretary of Defense, Comptroller, Operating Fund/Stock Fund Study, October 5, 1962, p. 74.

[2]Ibid., p. 62.

supplies to the Bureau of Supplies and Accounts, but did not change the method of funding.[3] The Bureau of Supplies and Accounts had been given the responsibility but not the money. To correct this deficiency, the Act of March 3, 1893 established the permanent Naval Supply Fund. The act read as follows:

> And the Secretary of the Treasury is hereby authorized and directed to cause general account of advances to be charged with the sum of two hundred thousand dollars, which amount shall be carried to the credit of a permanent naval-supply fund to be used under the direction of the Secretary of the Navy in the purchase of ordinary commercial supplies for the naval service, and to be reimbursed from the proper naval appropriations whenever the supplies purchased under said funds are issued for use.[4]

Three features of this Act are worthy of special note. The money was transferred from the "General Account of Advances" and not from the general fund of the Treasury. Only ordinary commercial supplies could be purchased with the fund, and the fund was to be maintained by reimbursement from the proper naval appropriations upon issue of the stock for use.[5]

This revolving fund concept has exerted an influence on the management of the fund throughout its existence. By the simple expedient of limiting the total amount of the fund, Congress has been able to control the quantity and value of naval inventories.[6] By limiting the use of the fund to purchases of ordinary commercial supplies, purchases of other categories of material continued to be made from annual appropriations.

The limitation established in 1893, soon proved inadequate and additional funds were authorized in each of the years 1897, 1898, 1899, and 1902.[7]

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[3]Robert D. Fisher, "The Navy Stock Fund" (unpublished Master's thesis, School of Government, The George Washington University, Washington, D.C., 1962), pp. 3-5.

[4]U.S., 27 Stat. 723.

[5]U.S., Navy Department, Bureau of Supplies and Accounts, History of Naval Stock Fund and Naval Supply Account, 1945 (mimeographed), p. 10.

[6]Fisher, op. cit., p. 7. [7]Ibid.

The demands of the fund continued to increase and when additional funds could not be obtained from Congress, the acting Secretary of the Navy authorized the transfer of all "common general stock" to the permanent supply fund in 1907. The Secretary of the Navy did not approve of this action and ordered it reversed. The Secretary's order was vigorously opposed by the Paymaster General, and a series of legal and political manouvers ensued.[8]

To settle the issue, Congress passed the Act of June 25, 1910, which established the Naval Supply Account and provided that:

> All stores on hand July first, nineteen hundred and ten, shall be charged to a naval supply account on the records of the Bureau of Supplies and Accounts, and all purchases of stock or expenditures for manufactured or repaired articles for stock at navy yards or station, during the fiscal years nineteen hundred and eleven and nineteen hundred and twelve, shall be charged to this account and be paid for from "General account of advances."
>
> The amount so advanced during the fiscal years nineteen hundred and eleven and nineteen hundred and twelve shall be charged to the proper appropriations as these stores are consumed from stock, and when disbursements made for all other purposes are accomplished, the amount so charged shall be returned to "General account of advances" by pay or counter warrants: Provided, however, that such material as provisions, clothing and small stores, medical stores, and such other materials as the Secretary of the Navy may designate, may be purchased by specific appropriations or transferred to specific appropriations before such materials are issued for use or consumption. The said charge, however, to any particular appropriation shall be limited to the amount appropriated therefor.[9]

This act brought all of the stores in the naval establishment into one fund. The only limit on the fund as a result of this act was the amount set up on the books of the Treasury in "General account of advances" which was the sum and total of the annual naval appropriations.[10] It also continued authority to purchase certain materials from specific appropriations at the discre-

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[8] History of the Naval Stock Fund (Supra, p. 4), pp. 14-20.

[9] U.S., 36 Stat. 792.

[10] John W. Hempstead, "A Study of the Navy Stock Fund 1893-1952" (unpublished Master's thesis, The American University, Washington, D.C., 1953), p. 26.

tion of the Secretary of the Navy.

The Act of March 4, 1911, (36 stat. 1279) abolished the permanent Naval Supply Fund established in 1893 and made the Naval Supply Account established by the Act of June 25, 1910 permanent.[11]

From 1911 to 1921, the Naval Supply Account remained, with one exception, virtually unchanged in so far as new legislation was concerned. Legislation passed in 1914, provided for crediting the value of all stores, equipage, and supplies turned in from ships to the current appropriation concerned. It also provided that such amounts so credited could be used for the same purposes as the appropriation credited. This action was designed to relieve the annual appropriations from being charged twice for the same material.[12]

The Act of March 1, 1921[13] returned the fund to the permanent type of fund it had been in 1893. The fund was capitalized at an amount equal to the value of stores in the Naval Supply Account on 31 March 1921. The size of the fund was no longer directly dependant upon the size of the annual appropriations. The fund became the separate entity it is today and except for changes in its name and amount of capitalization, the basic principles under which the 1921 fund was established remain virtually unchanged.[14]

The value of the fund as of 30 June 1921, was $265,662,738.01, of which approximately $250 million was invested in supplies. Through economy measures, congressional reappropriations, and operating losses in ensuing years, the fund was reduced to approximately $70 million on 30 June 1939.

In 1939, the request for an appropriation to the Naval Stock Account fund was increased by one million dollars to finance additional aeronautical

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[11] Ibid., p. 27.

[12] Ibid., pp. 28-29.

[13] U.S., 41 Stat. 1169.

[14] Hempstead, op. cit., pp. 32-33.

and ship material. Congress thought the larger part of this material was purchased for immediate use and should be purchased under the appropriation concerned, and the request was refused.[15] This was the beginning of the return to buying technical material from appropriated funds instead of the stock fund. On 16 July 1941, the Paymaster General, Admiral Spear, appearing before Subcommittee of the Committees on Appropriations, House of Representatives, reported that technical materials that were peculiar to one branch of the service were not carried in the Naval Supply Account Fund.[16]

It was not until after the declaration of the National Emergency on 5 September 1939, and the resulting build up in naval forces, that Congress would authorize additional appropriations to the fund. After the outbreak of World War II the fund was built up rapidly by one appropriation after another, and the name was changed from the Naval Supply Account Fund to the Navy Stock Fund.[17]

At the time of the attack on Pearl Harbor the ships afloat, as well as shore activities, accounted for Naval Stock Fund stores in the same manner. In other words, the supplies on board ships were carried in the Navy Stock Account and were charged to the appropriate appropriation as the material was issued. This involved considerable paperwork afloat and was not considered feasable in war time.[18] On February 1, 1942,[19] Congress authorized the Navy to expend "the balances of supplies and materials on board Naval vessels on January 1, 1942" from the Navy Stock Account without charge to current appropriations.

After World War II, an effort was made to return the ships to the

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[15]History of the Navy Stock Fund (Supra, p. 4), pp. 40-64.

[16]Ibid., p. 67. [17]Ibid., pp. 64-69. [18]Ibid., pp. 69-70.

[19]U.S., 56 Stat. 79.

prewar system.

> The stocks of "general stores" carried aboard "ships with Supply Departments" were once again financed under the Stock Fund. The smaller ships, destroyers and smaller, carried Supply Corps Officers designated "Stores and Disbursing Officer". The stocks of materials carried on these ships were expended to end use and placed in the custody of the departments which had ordered them. The Korean War brought the usual attack on "paperwork afloat" coupled with increased emphasis on the proposition that fleet inventories should be under the control of the fleet and stock funding of shipboard stocks was again abolished. It was decided that shipboard inventories of general stores and repair parts could be managed and controlled through the use of allowance lists and load lists. These stocks were charged to fleet operating funds when transferred to the ships, tenders, and repair ships. Appropriation accounting ended at "tidewater".[20]

It should be reemphasized at this point, that not all types of material used aboard ships were carried in the Naval Stock Account. The categories of material financed under the Navy Stock Fund during Fiscal Year 1952, included only: general stores (general consumables of all types), vehicular equipment repair parts, special shipboard electrical fittings and fixtures, clothing, provisions and ship store stock, and fuels and lubricants.[21] Technical repair parts and most items of equipage were not carried in the Navy Stock Account. Those items were purchased by the responsible technical Bureaus from annual appropriations and carried in the supply system in a stores account known as the "Appropriation Purchases Account" until issued to the ships. Since these items had been initially charged to an annual appropriation at the time of purchase, they were not charged to this ships' operating funds when issued to the ships. They were "free issue" as far as the ships' funds were concerned.

The ability to control the total investment in inventories through the use of stock funds impressed the members of the first Hoover Commission. The work of this Commission resulted in the passage of Title IV of the National

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[20]Fisher, op. cit., p. 25.

[21]U.S., Navy Department, Bureau of Supplies and Accounts, The Navy Stock Fund, Annual Report, Fiscal Year 1952, NavSandA Publication 263.

Security Act of 1947, as amended,[22] Section 405 of which authorized the Secretary of Defense to "require the establishment of working-capital funds in the Department of Defense for the purpose of (1) Financing inventories of such stores, supplies, materials, and equipment as he may designate." Two factors significant to the future operation of the Navy Stock Fund and financing of shipboard inventories resulted from this act. "Since this time the monetary amount of the fund has been regulated through the regular budgetary and apportionment process,"[23] and most categories of technical repair parts and equipage have been transferred from appropriation funding to the Navy Stock Fund.

For example, electronics items were transferred to the Navy Stock Account on 1 July 1953, ships' repair parts were transferred on 1 July 1957, and ordnance repair parts were transferred on 1 July 1959. In each case, as items or categories of material were transferred from the Appropriation Purchases Account to the Navy Stock Account, they became chargeable to the ships' operating funds. Today the only categories of material carried in inventory aboard ship which are not carried in the Navy Stock Account are technical aeronautical and aerological material, Bureau of Ships special material, and technical ordnance material.[24]

With the continued migration of shipboard type material from the Appropriation Purchases Account to the Naval Stock Account, it became increasingly difficult to finance stocks on board fleet issue ships, tenders, and repair ships at an acceptable level. To reduce the drain on operating funds, stock fund financing was extended to fleet issue ships in 1955. In 1959, stock fund financing was extended to inventories aboard four tenders and repair ships

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[22]U.S., Public Law 215, August 10, 1949.

[23]Fisher, op. cit., p. 12.

[24]U.S., Department of the Navy, Office of the Comptroller, Navy Comptroller Manual, Volume 3, par. 032211.

on a test basis. As a result of this test, stock fund financing was subsequently extended to all tenders and repair ships.

Today there are two variations of the stock fund/consumer fund system and the appropriation/free issue system employed to fund shipboard inventories. On tenders, repair ships, and fleet issue ships, inventories of Naval Stock Account type material are carried on board the ships in the Naval Stock Account, and the ships' operating funds are charged when the material is issued for use. On all other types of ships, Naval Stock Account material is charged to the ships' operating funds at the time it is issued to the ship. Appropriation Purchase Account material is issued free of charge to all ships.

The consumer funds for the operation and maintenance of the active fleet ships are appropriated by Congress under the appropriation, Operation and Maintenance, Navy. The Bureau of the Budget apportions the funds to the Department of Defense by quarter, at the appropriation level. The Department of Defense makes the funds available to the Comptroller of the Navy on a quarterly basis by the issuance of SD Form 348. Both the apportionment and the SD Form 348 limitations are legal limitations under R.S. 3679.[25]

The Comptroller of the Navy allocates the Ships and Facilities portion of the Operation and Maintenance, Navy funds to the Bureau of Ships. The Bureau of Ships provides each fleet commander a suballocation of funds which includes specific budget projects for regularly scheduled overhauls, restricted availabilities, and supplies and equipage. In Fiscal Year 1963, the Navy has established a limitation on the supplies and equipage funds for each fleet commander.[26]

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[25] Operating Fund/Stock Fund Study (Supra, p. 3), pp. 39-40.

[26] Ibid., p. 40.

Supplies and equipage funds are alloted by the fleet commanders to each of their subordinate type commanders. These allotments are also legal limitations. Each type commander is responsible for the financial management of all ships under his command, and authorizes each ship to charge the type command allotment for the necessary operating costs, supplies, and equipage. The type commanders are not authorized to suballot funds to individual ships, but they are permitted to establish operating target amounts (OPTARS) for each ship.[27] These OPTARS are intended to represent the type commander's estimate of the ship's requirements for a stated period of time. In actual practice, they represent the amount they type commander can afford to let each ship spend, rather than the amount actually required. The OPTARS are not limitations of funds in a legal sense, however, they are limitations in a practical sense, because exceeding the OPTARS at the individual ship level could cause the funds controlled by the type commander to become overobligated.[28]

The ships' supplies and equipage funds are used to provide simultaneously for the operating costs of consumables used in day-to-day maintenance and operation, for pilotage, wharfage, tug service, telephone service, repairs to ships vehicles and office labor-saving equipment, for replacement of items of equipage, plus maintaining prescribed levels of inventories on all ships except tenders, repair ships, and fleet issue ships.[29]

The initial allowance of repair parts for new ships and new equipments installed during the life of the ship, are charged to funds granted to the outfitting or installing shipyard by the Bureau of Ships. Subsequent replenish-

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[27] Navy Comptroller Manual, Volume 8 (Supra, p. 9), pars. 082020-082041.

[28] Review of Stock Funds in the Department of Defense (Supra, p. 1), p. 4.

[29] Navy Comptroller Manual, Volume 8 (Supra, p. 9), par. 082201.

ment of parts used and increases in allowance must be paid for by the ship.

The supplies and equipage funds alloted to the type commander represent the consumer funds of the stock fund/consumer fund concept. The terms supplies and equipage funds, operating funds, and consumer funds are analagous and will be used interchangeably in this paper.

CHAPTER III

THE PROBLEM AREAS

The basic problem area in the current stock fund/consumer fund system arises from a condition that has existed for some time and can be expected to continue--limited consumer funds with which to maintain and operate the Navy. Under the present funding system, the ships' OPTARS are required to finance both day-to-day operational and maintenance costs and prescribed levels of inventories. However, the funds provided are not adequate for both purposes, and herein lies the heart of the problem.

If the ships are to carry out their operational commitments, the operating costs must of necessity have first priority over available funds, and replacement of inventories suffers accordingly. Some of the results of this practice are described by the following comments from the Commander in Chief U.S. Atlantic Fleet:

> The insufficiency of Supply and Equipage funds with which to buy repair parts for inventory afloat has now become critical and will hamper operations even more seriously as current inventory is further eaten down. Three principle facets of the problem which are products of the existing S&E funding shortages are indicated below:
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> a. Readiness of the fleet is being progressively degraded by the growing shortage of repair parts and equipage, and to a lesser degree, consumable material aboard ship. These shortages result from insufficient S&E funds to procure the required inventory to fill allowance and/or meet minimum levels of support established by the Fleet Commanders. . . . Fleet allowance and equipage deficiencies can be expected to reach a magnitude of 22.5 million dollars by the end of FY 63 unless positive steps can be taken to prevent such spiraling deficiencies. Fleet authority to transfer funds from other budget projects into S&E has been rescinded. No relief can therefore be obtained through this budgetary device.
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> b. An accurate picture of the situation is difficult to obtain. . . . There is no practical cost accounting method available to determine the

"mix" among the uses for S&E funds, and to establish the true rate at which operating costs are accrued. Under the severe pressure of insufficient OPTARS, ships are forced to consume their investment in allowance list material to sustain operations. During fiscal year 1963, the fleet is being funded at a 68% level of its stated requirements for operations. . . . In addition to a continuing reduction in the material readiness, demand data is being understated to the supply system. Thus the fleet is not only faced with a situation undermining its ability to perform, but it is also presenting false indications as to true costs being incurred, which can only aggravate the situation further in subsequent budget cycles.

c. Present accounting procedures prevent the free flow of material from activities ashore to the Fleet and vice versa. These procedures deny afloat units the material already in the supply system, and needed to perform assigned missions, but unavailable because of lack of S&E funds. On the other hand, it encourages the retention of material not required for current operations because of the low ratio of credit to initial purchase costs. . . . Additionally, towards the end of each Fiscal Year many bonafide fleet requirements are cancelled because end use funds cannot be obligated for these items before the end of the Fiscal Year. Procedures such as these described are both antiquated and unacceptable to modern standards of material management.[1]

The conditions described by the above comments have been verified and further amplified by the General Accounting Office.[2] On nineteen of the thirty-one ships visited, the General Accounting Office found shortages in ship repair parts, electronics repair parts, and submarine repair parts amounting to about $400,000.

A review of 1,775 line-item shortages disclosed that 1,223 of them had zero balances on the ships and that sufficient quantities for 1,031 of the 1,775 items, and 608 of the 1,223 items, were available at the Navy supply sources at the ships' home port. Consideration of the quantities available at other supply sources would greatly increase the number of line-item shortages that could have been filled.[3]

This review led the General Accounting Office to the conclusion that there were sufficient quantities of material available in the naval supply system to meet most of the ships' requirements, but the ship could not requisition the material because of insufficient consumer funds.[4]

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[1]U.S., Commander in Chief U.S. Atlantic Fleet, Letter (Supra, p. 1).

[2]Review of Stock Funds in the Department of Defense (Supra, p. 1).

[3]Ibid., p. 27. [4]Ibid.

Thus, both the General Accounting Office and the Commander in Chief U.S. Atlantic Fleet identify the shortage of consumer funds with which to buy materials from the stock fund as the immediate cause for inadequate inventories aboard ships. Both sources also commented upon the fact that most of the required material exists in the supply system, but the ships are denied the use of the material because of the requirement to buy it from the stock fund. This implies, at least, that the stock fund/consumer fund system itself aggravates the problem, and to some extent it does.

In the Navy material classifications system,

> . . . most cognizance categories include items which range in characteristics from frequently issued "best sellers" to non-moving insurance items; from items which are stable in design to those subject to change and obsolescence; from "bits and pieces" widely used in maintenance work to equipments issued only to fulfill Bureau-directed installation programs; from common, consumable hardware worth a few cents to extremely expensive repairable assemblies. Despite this range of characteristics, most Navy decisions to stock fund items of supply have been made on the basis of entire categories of material managed by supply demand control points.[5]

This stock funding policy has tended to magnify the consumer fund problem. The more items of material that are carried in the stock fund, the more consumer funds the ships must have to obtain the materials they need. Also, when high cost items and items of unpredictable demand, such as insurance items, are carried in the stock fund, any sudden or unforseen increases in usage results in an immediate "squeeze" on the ships' OPTARS. Conversely, when these items are not carried in the stock fund, changes in usage rate do not affect the OPTARS. So the stock fund/consumer fund system, as presently applied, not only increases the amount of consumer funds required by the ships, but it makes these funds much more vulnerable to unexpected demands.

Another common complaint against the current system is the fact that

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[5]U.S., Navy Department, Office of the Secretary, SecNav Instruction 7113.4 of 8 August 1962, p. 1.

type commanders' allotments do not receive full credit for material turned in by the ships. The credit policy of the stock fund is to grant credit only for the value of returned material which is not in excess of system requirements, as determined by the cognizant Inventory Control Points.[6]

Under the present system, the ships must estimate and pay for material requirements, often times, far in advance of actual use. Changing conditions change requirements, and materials purchased in advance to meet requirements that do not materialize become excess. These same conditions create excesses in total system stocks, and many of the items that are excess to the ships are also excess to the total system. Thus, the ships cannot obtain credit for these items when they are returned to the supply system. The net result is that operating funds are tied up on excess stocks while current requirements cannot be met. Here again, the system contributes to the problem.

However, as will be discussed in more detail in subsequent chapters, a change in the funding system, as has been proposed,[7] will not, in itself, reduce the over-all cost of material required to maintain and operate the ships of the fleet. The question that must be answered before a solution to the problem can be found is: why are consumer funds inadequate?[8]

Two factors that have a bearing on this aspect of the problem were identified by the Commander in Chief U.S. Atlantic Fleet.

First, the practice of the ships using up allowance list material and not replacing it tends to present a false picture of the true costs actually being incurred. Under the present funding and accounting system, the material

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[6]Fisher, op. cit., p. 44.

[7]See: Commander in Chief U.S. Pacific Fleet, Letter (Supra, p. 1), and Review of Stock Funds in the Department of Defense (Supra, p. 1), p. 11.

[8]U.S., Department of the Navy, Office of the Comptroller, Letter of 17 May 1962 to the Chief of Naval Operations.

is charged to the ships' OPTARS at the time the material is issued to the ship, instead of when actually used. The charge is reflected in the official accounting records at that time. Therefore, the value of the material used by a ship, but not replaced in the inventory, is not reflected as a charge to the OPTAR. The value of such material is reported to the type commanders either monthly or quarterly, as required, on the working capital reports,[9] but this is the only accounting made of the true cost of operations. This deficit in inventory is recognized and budgeted for by the fleet and type commanders each year, but the official accounting records do not reflect this requirement. Consequently, higher review authorities and the Congress have taken the view that since these inventories were not replaced they were not actually needed, and the funds required to replace them have not been provided.[10]

Second, the present afloat accounting system provides the fleet and type commanders with dollar data on the material issues to the ships and dollar data on material issued from the ships' storerooms for use,[11] but it does not provide a breakdown of the type of material issued, or the purpose for which it is used. Consequently, they cannot adequately distinguish between operating costs and maintenance costs. In other words, the fleet and type commanders have no way of determining what it actually costs to maintain or operate a ship of a given type.

This places the fleet commanders at a disadvantage when preparing and justifying their supplies and equipage budgets. As a result, these budgets

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[9]Navy Comptroller Manual, Volume 8 (Supra, p. 9), par. 084161.

[10]Captain W.H. Cross, USN, Comptroller, Bureau of Ships, in a speech to the Navy Financial Management Class, The George Washington University, 10 April 1963.

[11]Navy Comptroller Manual, Volume 8 (Supra, p. 9), pars. 084157 and 084161.

are submitted not as planned programs, but as estimates[12] which are difficult to support and defend. Since they are estimates, they are subject to more critical review by the reviewing authorities.

Closely allied with, and contributing to the inability to determine actual costs and predict future requirements is the lack of a uniform planned maintenance program. This lack of a planned program contributes to the supplies and equipage funding problem in two ways. First, in the absence of such a program, maintenance is frequently not planned ahead but performed more or less on an "as required" basis. On this basis, it is very difficult if not impossible to predict future parts and funds requirements with any degree of accuracy. Second, in the absence of a planned maintenance program for new equipments, repair parts are provisioned on the basis of engineering estimates of failure rates and uncertain maintenance policy.[13] The initial allowances of repair parts are furnished to the ships on this same basis, and when these estimates prove to be wrong, the ships must fund the additional parts required from their, already inadequate, OPTARS.

The supplies and equipage funding problem is further complicated by the "material failure, unreliability, and high operational and maintenance costs brought about by old age of most of the ships of the fleet."[14] As these ships become older the failure rate of machinery and equipment increases, and a proportionately larger amount of funds is required, each year, just to

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[12]U.S., Department of the Navy, Office of the Chief of Naval Operations, Intra-office memorandum from OP-412C to OP-90 on Management of the Navy Supply System, 15 June 1962, pp. 2-3.

[13]Ibid., pp. 4-5.

[14]U.S., Congress, House Committee on Armed Services, Report of Special Sub-Committee on Composition of the Fleet and Block Obsolescence of Naval Vessels, 87th Cong. 2d Sess., 1962, p. 7249.

keep them operational. Under the level budget philosophy that has prevailed for several years, this steadily increasing maintenance cost has a "shrinking" effect on the supplies and equipage funds. Here again, the lack of a planned maintenance program and the inability to distinguish maintenance costs from operational costs further aggravate the problem.

"Approximately three out of four ships of today's fleet were built under World War II programs with capabilities designed to meet the World War II threat."[15] In order to make these ships effective against today's threat, many of them have been modernized and refitted with newer and more complex armament and equipments. These new equipments invariably require a greater number of repair parts to support them, and at a much higher cost. For example, a World War II light cruiser required an allowance of 4400 electronic repair parts at a cost of $33,600. This same ship converted to a guided missle cruiser requires an allowance of 10,000 electronic repair parts at a cost of $300,000.[16] Although the initial allowance of parts is financed from funds granted to the processing point, the ships' OPTARS must pay for a larger number of more expensive replacement parts when these parts are used. This takes another "bite" out of the OPTARS.

Further complicating this part of the problem is the fact that many of these equipments are new developments, being introduced into the fleet for the first time, or they are new modifications of previous designs. They frequently have not been tested under actual operating conditions. When placed in use, parts fail that were not expected to fail, and others have to be replaced at

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[15] Ibid., p. 7248.

[16] U.S., Navy Department, Navy Management Office, Study of Navy Organization for Electronic Matters, June 1962, Appendix N.

a faster rate than expected. The ships' OPTARS must bear the added expense. These same conditions apply to the new ships being added to the fleet, but to an even greater extent.[17] Not only are the weapon systems and supporting equipments new, but frequently all of the ship's machinery is new or a modified design, and the added financial burden of "shaking down" and operating the new ships is more pronounced. For example, the OPTAR required by a Polaris submarine is eight times as large as that required by a conventional submarine.[18]

All of these factors, older ships wearing out and requiring progressively larger amounts of maintenance funds, more complex equipments containing greater numbers of more expensive parts and components, and new ships and equipments entering the fleet, are things which can be expected to occur. They are not hard to visualize, and it is not difficult to see how they can increase the cost to maintain and operate the ships of the fleet. But, to predict, in advance, when and to what extent old ships and equipment will require repairs, or how many expensive parts and components will have to be replaced in new and unproven equipment is another matter. These are things which the ships and fleet and type commanders cannot control and cannot predict with any degree of accuracy. To convert these uncontrollable uncertainties into firm dollar budgets that can be justified and defended before the various reviewing authorities and the Congress is next to impossible.

There is one other factor which adds to the supplies and equipage funding problems. As stated above, accurate prediction of funds required for ship maintenance and operation is next to impossible.

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[17]The above comments are based on personal experience aboard a converted destroyer and discussions with Supply Officers who have recently returned from duty aboard new guided missle frigates.

[18]Cross, op. cit.

> Furthermore, requirements and priorities change constantly after the funds have been alloted, especially because of such world events as the Suez, Lebanon, and Berlin Crises.[19]

A more recent example of events that can radically change operational requirements is the Cuban crisis that occurred in October, 1962.

Yet, the funds allocated to the Bureau of Ships and [illegible] alloted to the type commanders are legal limitations of funds, which do not provide for these fluctuations in requirements.

Thus the ships and fleet and type commanders are presently in an untenable funding situation. The factors which determine future funds requirements cannot be accurately predicted, are frequently uncontrollable, and are subject to constant change, while the funds provided to meet these requirements are, for all practical purposes, fixed dollar ceilings. This is the dilemma which has forced the ships to use up their inventories without replacing them, and resulted in the deterioration of fleet readiness.

This problem and the numerous factors which have produced it are the things that must be dealt with if the fleet is to be maintained at an acceptable level of readiness. In the next chapter some of the actions taken and/or proposed to alleviate this problem will be discussed.

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[19] Review of Stock Funds in the Department of Defense (Supra, p. 1), p. 40.

CHAPTER IV

PROPOSALS FOR IMPROVEMENT

The problem areas identified in the previous chapter are not recent developments, nor have they gone unrecognized. To the contrary, a lot of effort has been devoted to studying the problems and developing proposed solutions. Some of these proposals are in the process of being implemented while others are still in the discussion and evaluation stages. Because of their impact upon other proposals still under consideration, those approved for implementation will be briefly discussed and considered first.

Experience and a Navy review of stock funding problems[1] have led to the publication of revised criteria for the exclusion of items from the Navy Stock Funds. These criteria are quoted in pertinent parts below:

> Items which meet one or more of the following criteria will normally be excluded from Navy . . . Stock Funds. . . .
>
> a. Items assigned for inventory management to Navy Bureaus. These are:
>
> (1) Items in a research and development stage;
>
> (2) Items for which budget and procurement requirements, quality control and/or assignment to use require continuing logistics engineering, or fiscal administration and control at either the department or service level; and
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> (3) Items procured and issued for specific installations, and not planned to be replenished and available for general use.
>
> b. Items whose future sales are not likely to maintain the Stock Funds' revolving nature by return of the stock investment. Examples are insurance items with a high cost inventory investment and little probability of demand.

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[1]U.S., Navy Department, SecNav Instruction 7113.4, op. cit.

c. Items subject to high rates of obsolescence.

d. Items which are repairable and which, when replaced, are to be exchanged or returned by users for induction into repair programs.

e. Items which cannot be assigned a firm standard price immediately upon entry into inventory or within a reasonable period thereafter.

f. Items which are subject to rapid design changes, regardless of whether in the research and development stage or in operational use.

g. Items which, if subjected to a funding constraint at the consumer level, could result in unacceptable risks to personnel or equipments.

h. Items of high cost which are locally unpredictable in demand and the acquisition of which at the consumer level would place an inordinately heavy burden on operation allotments. Items of this nature should be determined only after full consideration of the other criteria listed above.[2]

A committee in the Bureau of Supplies and Accounts is currently working on the implementation of these criteria. It has been estimated that close to 80% of the items on a ship's allowance list are of an insurance nature. When this committee completes its work in June or July of 1963, a significant percentage of allowance list items now stock funded should be transferred to appropriation funding.[3]

The degree of relief that will accrue to the consumer funds by application of these criteria will be directly proportional to the extent to which the "problem" items are removed from stock fund financing. As items are transferred from the stock fund to direct appropriation funding, the procurement appropriations will have to be increased accordingly. Since the consumer funds will also be relieved of the financial burden of these items, it is quite probable that a corresponding decrease will ultimately be made in operation and maintenance funds. However, the ships will no longer have to pay for replacement of high cost insurance items and other high cost items

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[2]Ibid.

[3]U.S., Navy Department, Bureau of Supplies and Accounts, Staff Study on Fleet Supply Readiness Problems (unpublished), March 1963, pp. 2-3.

which are unpredictable in demand and which place inordinately heavy burdens on operating funds. Sudden and unexpected increases in usage of these items will no longer affect the ships' OPTARS. The real relief that will accrue to the ships will be in the form of more stable, predictable, and manageable funds requirements.

In the maintenance area, a Standard Navy Maintenance Management System is being developed for implementation beginning in July 1963.[4] This maintenance management system is not sufficiently developed to be discussed in detail. However, a brief description and speculation of its future implications is deemed appropriate. The proposed system provides for a standard maintenance plan for each piece of shipboard machinery and equipment and a standard system for reporting maintenance and repairs performed. Each ship will be furnished a deck of cards containing the pertinent maintenance and repair data for each piece of installed machinery and equipment. Preventive maintenance will then be performed according to a prescribed plan for each piece of equipment. Theoretically, at least, all equipments of a given type will receive the same level of maintenance at prescribed intervals.

Through the standard reporting system, maintenance and machinery casualty reports will be forwarded through the various levels of management to a central reporting center.[5] Through the use of modern data processing equipment, detailed maintenance and casualty data can be accumulated and analyzed to determine causes of equipment failures and provide a basis for predicting future maintenance requirements.

The maintenance management system is based on a maintenance system that

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[4]U.S., Navy Department, Office of the Chief of Naval Operations, OPNAV Instruction 4700.16 of 8 March 1963.

[5]Ibid.

was developed and is currently in use aboard an Atlantic Fleet destroyer. Present plans provide for installation on all destroyer type vessels beginning in July 1963 with ultimate installation on all fleet ships by February 1965.[6]

While the full advantage of this maintenance management program may not be realized for several years, it will ultimately play an important role in the funding of shipboard maintenance requirements. When the planned maintenance program is fully implemented and the reporting system begins to provide the necessary "feedback", Navy management levels will have a more firm basis for predicting maintenance requirements.

Looking further into the future, it is expected that analysis of failure and usage data provided by this system will enable the Navy to develop more accurate and realistic allowance lists of repair parts to be carried aboard ship. As stated by Vice Admiral Sylvester:

> . . . our allowance lists will more closely relate the criticality of parts failures to equipment and the effect of failures on the ships' mission.[7]

An insight into the future role of the maintenance management system in the repair parts problem is contained in the following statement:

> We are emphasizing, . . . that both the engineering and the supply organizations must complement each other's activity extremely closely in the use of stock status, failure and usage data. Repair parts and components come only at great cost after austere financial review.[8]

Since March of 1962, three separate proposals to change or modify the current system of funding shipboard inventories have been submitted. These

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[6]Ibid.

[7]Vice Admiral John Sylvester, USN, "U.S. Navy Maintenance Management Goals - 1962 through 1967," An address delivered to the Department of Defense Maintenance Management Conference, 5 December 1962, p. 6.

[8]Ibid., p. 8.

proposals will be discussed in the order submitted.

The first proposal was submitted by the Commander in Chief U.S. Pacific Fleet in March of 1962. Pertinent parts of this proposal are quoted below:

> 2. At the Commander in Chief U.S. Pacific Fleet Type Commander's Conference on 19 February, there was amplified discussion of the proposal to carry shipboard stocks of consumables and repair parts in the Navy Stock Account. In view of the serious inadequacy of funding for this category of material, CINCPACFLT feels that early action to adopt any procedures which will improve material readiness is warranted. It is felt that the procedure of carrying this material in the Navy Stock Account will assist in providing timely data as to consumption of material and will thus assist in supporting budget presentations for adequate funding.
>
> . . . . . .
>
> 5. The advantages which will accrue from adoption of the proposed procedure seem clearly to outweigh potential disadvantages. Accordingly, it is requested that the Chief of Naval Operations initiate action to convert the inventories in ships with central storerooms to the Navy Stock Account, Class 207, and to provide for these ships to procure, stock and expend material as now prescribed for tenders and repair ships. . . .[9]

This proposal was initially presented at a Commander Service Forces Joint Conference by Rear Admiral E.F. Metzger, SC, USN, Supply Officer, Commander in Chief U.S. Pacific Fleet, and was the subject of considerable discussion prior to its formal submission. The conference report listed the following advantages to such a procedure:

> To me the most important advantage is that this action will enable the ships to carry on board the items needed to stay at sea. This is not possible now, but stock funding will make it possible.
>
> Second, this will improve available knowledge as to true consumption rates and true requirements for mobilization and for budget purposes.
>
> Third, it will simplify the work aboard ship and it will reduce the workload ashore.
>
> Fourth, it will eliminate the "end of the fiscal year" problem which now prevents ships from replenishing in an orderly manner.
>
> Fifth, operating funds will be used for operating and will not be tied up in inventory.

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[9]U.S., Commander in Chief U.S. Pacific Fleet, Letter (Supra, p. 1).

Sixth, it will eliminate the current serious problem of erroneous charges to OPTARS and Type Commander Allotments.

Lastly, as a general observation it will put us on a business-like basis with good management control of our funds and inventories.[10]

From a fleet viewpoint the stock funding of inventories aboard tenders and repair ships has proven to be successful as indicated in the following statement by Admiral Metzger:

It is interesting to note that, while this action was taken as a sort of a measure of last resort, the results have been outstandingly successful. It is in this segment of the Fleet that we have no trouble with availability of repair parts.[11]

As was to be expected, the proposal to extend this system to the combatant ships met with considerable controversy and produced some equally impressive disadvantages against which these advantages must be weighed.

It is generally acknowledged that this procedure would initially provide the necessary range and depth of required material aboard ships with central storerooms. But it would not solve the problem for a number of smaller ships, including some destroyer types, submarines, and other vessels without central storerooms.[12]

There is also some reservation about the ability of the stock fund to support ships' allowances on a continuous basis. The redistribution of stock fund inventory to the shipboard level would reduce the depot inventories unless additional stock fund money could be obtained to replenish them. Experience with the shift of tenders and repair ships to stock funding does not indicate that the Department of Defense or the Bureau of the Budget would

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[10]Report of Commander Service Forces Pacific-Commander Service Forces Atlantic Joint Conference, San Diego, California, 19-24 February 1962, Agenda Item No. 30, p. 13.

[11]Ibid., p. 12.

[12]U.S., Commander Service Force Atlantic Fleet, Letter serial 50/3068 of 13 April 1962.

consider this a valid basis for the apportionment of additional funds to the stock fund.[13]

The stock fund had to absorb approximately $10. million required to meet deficiencies in the tender and repair ship load lists. On this basis the deficiency in funding problem is not solved but shifted from the consumer funds to the stock funds. Unless the stock fund has sufficient funds to replenish stocks and procure the new items entering the system, the required material will still not be aboard ship where it is needed. Another factor contributing to the hesitancy to tie up stock fund money in shipboard inventories is the apportionment controls presently exercised over the stock fund. As reported by the Senate Armed Services preparedness subcommittee:

> The most frequently cited obstacle to a more effective use of the stock fund is the difficulty encountered under the present method of apportioning obligational authority in order to procure stocks on an orderly and timely basis to meet customer demands. Situations have developed in the past where prompt procurement authority needed by the stock fund manager was not available to acquire material to satisfy customer-funded requisitions. This was brought about by the need to seek apportionment from the Department of Defense and the Bureau of the Budget. This interferes with proper supply support.[14]

Other commonly mentioned disadvantages such as the probability of ships over-stocking, further reductions in ships' operating allotments, loss of control of inventories by fleet and type commanders, and increased control by the comptroller types can be "intelligently debunked".[15]

However, more pertinent to the basic problem is the question; to what extent will extension of stock funding to combatant ships solve or alleviate

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[13]U.S., Navy Comptroller, Letter (Supra, p. 16).

[14]U.S., Congress, Senate Committee on Armed Services, Report of the Preparedness Investigating Subcommittee, The Operation of Stock Funds in the Military Establishment, 86th Cong. 2d Sess., 1960, p. 15.

[15]Fisher, op. cit., p. 53.

the problem of insufficient consumer funds? Moving the material one echelon closer to the end user will not increase the size of the OPTAR. It will, however, act as a one time augmentation in that the ships will be able to obtain a full allowance of material without charging it to their OPTARS. This procedure will also permit the ships to keep a full allowance on board, provided the material is in the supply system. This would be a distinct advantage in cases of national emergency. The ships could theoretically, at least, be combat loaded at all times.

Another advantage of this procedure, from the ships' viewpoint, is that OPTARS would not pay for the material until it was actually drawn from the storerooms for use. Operating funds would not be tied up in inventories that might later become excess. On the other hand, the loss of funds due to disposal of excess stock would have to be borne by the stock fund. This would in turn aggravate the funding problem in the stock fund.

If stock funding is extended to the shipboard level, the appropriation accounting system will also be extended to that level. Charges to the OPTARS will then be reflected in the official accounting records at the time the material is actually used. This will provide a record of the true costs of maintaining and operating the ships. Equally important, these costs will be reflected in the financial and accounting reporting system, and can be accumulated at desired management levels for budget preparation and justification.

This system will also provide more orderly and accurate demand data on ships' requirements to the supply system. Items of shipboard inventories can be reordered as they are used instead of waiting until OPTAR funds are available for inventory replenishment. The supply system will be advised of the ships' requirements as they occur, and can more accurately project system stock requirements.

Thus, extension of stock funding to combatant ships will not, in itself,

solve the problem of insufficient consumer funds. It will, however, alleviate the impact of the shortage of funds and provide a basis for more accurately determining and justifying funds requirements. But as long as material and service requirements exceed the available OSTAR funds, there will continue to be "circumstances where inventory needed for use is available in the stock fund but consumer funds are not available to buy it out."[16]

This was one of the conditions which led the General Accounting Office to propose:

> . . . that the Secretary of Defense have the Military departments discontinue the use of consumer funds for repair parts and other materiel at the combat and combat support levels.[17]

Since the adoption of this proposal would require certain changes in providing the funds for procurement purposes they further proposed:

> . . . that the Secretary of Defense either (1) provide that consumer funds for repair parts and other combat materiel remain at the department levels rather than be allotted to and through the various command strata and that the procuring activities be reimbursed from these funds as materiel is issued to users or (2) eliminate completely the use of such consumer funds for repair parts and other combat materiel and have this materiel financed by annual appropriations from the Congress.[18]

The Department of Defense rebutted this proposal with the following statement:

> 1. With respect to the portion of the above recommendation which would eliminate the use of consumer funds completely for these items and have the procuring activities request annual appropriations from the Congress, the significant accomplishments experienced under the use of stock funds do not warrant the general conclusion that a system of procurement through annual appropriations should be substituted. Through improved supply and financial management, stock fund inventory was reduced each year from 1957 to 1961 with a total reduction of $4.2 billion. Inventory reductions occurred through the disposal of excesses and the use of stock fund material in long supply without replacement. This has resulted in cash

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[16] Operating Fund/Stock Fund Study (Supra, p. 3), p. 77.

[17] Review of Stock Funds in the Department of Defense (Supra, p. 1), p. 11.

[18] Ibid.

return to the Treasury or transfers to other appropriations in the amount of $5.2 billion since inception of stock funds.[19]

The above proposal is analogous to the appropriation purchases account system the Navy uses to fund aerological, aeronautical, and other special material. It is also favored by some offices of the Navy Department for funding other technical repair parts and insurance type technical materials.[20] As the revised stock fund criteria previously discussed[21] are applied, more and more Navy material will be funded in this manner. For these reasons some of the advantages and disadvantages of this method of funding will be presented.

From the point of view of the ships and fleet and type commanders, this system provides the most flexibility and readiness capability because material may be requisitioned on the basis of computed requirements, without financial constraint. This system is more responsive to emergencies and fluctuating requirements, where the material is in the supply system, because there is no necessity to obtain additional funds prior to requisitioning the material. Since no financial control is imposed upon movement between depot and shipboard levels, positioning of material in the supply system is facilitated by this system.[22] The shipboard paperwork and accounting functions are decreased because there are no OPTAR records to maintain. This method of funding would also reduce the necessity for repair parts to compete with other maintenance and operations costs for the scarce OPTAR dollars.

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[19]U.S., Department of Defense, Assistant Secretary of Defense, Comptroller, Letter of 21 August 1962.

[20]U.S., Navy Department, Office of the Chief of Naval Operations, Letter serial 2107P41 of 20 July 1962.

[21]Supra, p. 22.

[22]Operating Fund/Stock Fund Study (Supra, p. 3), pp. 62-64.

There are also certain disadvantages to this system, particularly from a management viewpoint. Since decisions to use or obtain material are not subject to financial constraints, the incentive to conserve material resources is not as great as it is under a consumer fund system. There are many people who would argue that this is not the case, but from personal experience, the writer has found this to be a valid statement.

As a result of the general atmosphere surrounding a free issue system, financial inventory accounting is not generally as reliable as under stock funds. "This has been repeatedly demonstrated where material has been transferred from appropriation to stock fund financing."[23] While, at a given point in time it may appear that more material resources are available to the end user under a free issue system, this is not a system wide condition. Such a system does not increase total resources since these are fixed by assets owned, on order, and financed under congressionally approved budget programs, regardless of the management system. Thus, material requisitioned by a user in excess of real needs may result in total system shortages.[24]

Likewise, austere procurement appropriations can and do result in material shortages at the end user level that have the same net effect as a shortage in consumer funds. The writer remembers quite well a severe shortage in aviation repair parts that existed in 1957 and 1958 as the result of budget cuts in the procurement appropriation.

The appropriation free issue system is not a cure all for a shortage of consumer funds. This system will provide more flexibility at the end user level, and to the extent that system stocks can be maintained at the required level, it will remove the problem from the fleet. However, unless adequate procurement funds are provided, system shortages will develop and the end

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[23]Ibid., p. 63. [24]Ibid.

result to the fleet is the same. The required material will not be available when needed.

A third proposal affecting the present stock fund/consumer fund system was prepared by a Department of Defense Working Group and submitted by the Assistant Secretary of Defense, Comptroller.[25] This study encompassed the operating fund/stock fund problems of the entire Defense Department, and is much broader in scope than this paper. However, certain of the recommendations submitted are pertinent to the subject of funding shipboard inventories. They will be discussed only to this extent.

To provide a basis for item identification according to material management requirements, the working group recommended establishment of the following definitions for use throughout the Department of Defense:

I. Item Definitions. . . .

A. Principal Items. End Items and Replacement Assemblies and Parts of such importance from the standpoint of military essentiality, significant economic impact, or extreme variability of demand, that management techniques require central item control of inventories throughout the supply system and a frequent and detailed examination and analysis of the factors, allowance and other criteria used to control issues, and requirements determination and supply and readiness status analysis.

B. Secondary Items. End Items, Replacement Assemblies, Parts and Consumables that are centrally managed by establishing station, ship, or base, and depot stock levels and using net issue experience in forecasting replenishment demand.[26]

Using the above definitions as a base, the group recommended that material be included or excluded from stock funds in accordance with the following criteria:

II. Stock Fund Criteria. . . .

A. Inclusions - All secondary items except for:

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[25] Operating Fund/Stock Fund Study (Supra, p. 3).

[26] Ibid., p. 12.

1. Insurance items.
2. Items directly related to the safety of personnel.
3. Repairable exchange-type items.
4. Items in research and development stage.

B. Exclusions - All principle items and excepted secondary items listed above.[27]

The establishment of standard definitions for item identification provides a common base for the application of stock fund criteria and the ultimate determination of what items the ships' OPTARS must pay for. However, from the Navy's viewpoint, these definitions should be considered as general guidance definitions rather than hard and fast rules. Otherwise, they would be too restrictive for the purposes of determining funding responsibilities.[28]

The stock fund criteria recommended by the working group is very similar to the revised Navy Stock Fund criteria except for the type of items to be excluded. The Navy criteria provides for the exclusion of the items recommended by the working group plus high cost items which are locally unpredictable in demand and items of a highly obsolescent nature. The exclusion of the latter items, on a selected item basis, is considered highly desirable. The Navy has recommended that its criteria be used as the basis for determining items which are to be excluded from stock fund financing.[29]

The Department of Defense working group also recommended:

III. Depth of Extension of Stock Funds.

A. That the stock fund for material primarily expended to operation and maintenance appropriations be extended only to the depot level, which is defined to cover CONUS depots and major supply points, overseas depots, and major supply ships and tenders.

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[27] Ibid.

[28] U.S., Navy Department, Office of the Secretary, Assistant Secretary of the Navy, Financial Management, Memorandum of 31 January 1963, Encl. 1, p. 1.

[29] Ibid., p. 2.

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C. That internal stock fund controls be established within each service to assure proper positioning of material at each stock fund storage location.[30]

In substantiation of this recommendation the group provided the following rationale summary:

> This selection is made with full appreciation of counter arguments that exist. It is believed that (1) the benefits of greater flexibility in the use of locally available resources or stock levels at a point in time, (2) recognition of the limited ability for ICP's to control inventories below depot level, (3) the provision of one basic funding account for the locally controlled and centrally controlled inventories at base level and (4) the fact that it is a proven system in an exceedingly complex area for some commodities in all services, outweigh the disadvantages of (1) possible drawdown of base level inventories below authorized levels, (2) the need for consumer funds (particularly O&M) to finance pipeline and levels, (3) the problems of positioning inventories for special purposes and (4) other less definitive objections that might be raised. These disadvantages, however, can be minimized [sic] by other actions such as improvement of program guidance to establish proper priorities for inventory levels and usage, recognition in O&M budgets of funding needs for pipeline and levels, and development of procedures to position inventories where required.[31]

Part A of this recommendation, would have considerable impact upon the funding and management of the inventories of the shore establishment, but it would not alter the current system of funding shipboard inventories. Instead, the working group would rely on a revised stock fund criteria and recognition in operation and maintenance budgets of funding needs for pipeline and inventory levels to alleviate the fleet funding problem. It is agreed that recognition of funding needs for pipeline and inventory levels by Department of Defense and Bureau of the Budget review officials and acknowledgement by the Congress in the form of additional operation and maintenance funds would help to alleviate the fleet's problem. However, this need is not now being fully recognized or acknowledged, and it is doubtful that it will until the fleet is better able to identify and support true requirements. This proposal offers

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[30] Operating Fund/Stock Fund Study (Supra, p. 3), p. 12.

[31] Ibid., p. 8.

no solution to this part of the problem. Recommendation III-3 is also contingent upon the fleet having sufficient funds with which to buy the material from the stock fund.

The opponents of extending stock funding to the combatant ships concurred in this proposal to the extent that it would prohibit such extension, but this feeling was not unanimous. Officially, the Navy did not concur in this recommendation. The reply to the Department of Defense stated, in part, that the effect of this recommendation would be:

> . . . in opposition to the recommendation of the Navy's committee on reorganization to extend the stock fund to combatant ships with central storerooms. While the pros and cons of such extension have been argued in the past, this recommendation is now before the Secretary of the Navy.[32]

This is where the issue stands today. The report of the Navy's committee on reorganization has not been released for general information and was not available for inclusion in this discussion. If the Secretary of the Navy has reached a decision on this recommendation, it has not been released. Likewise, no decision on the working group report has been released by the Department of Defense.

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[32]Assistant Secretary of the Navy, Financial Management, Memorandum (Supra, p. 34), p. 4.

CHAPTER V

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

The Navy at the present time uses two basic systems for financing shipboard inventories. This dual system came into being when the first Navy Stock Fund was established in 1893. From the time of its establishment until after World War II, the stock fund was used to finance consumable materials. All other materials were purchased from annual appropriations and issued free of charge to the ships. Prior to World War II, the ships carried consumable supplies aboard ship in the Navy Stock Account and charged them to appropriated funds at the time of issue for use.

During World War II, consumables were charged directly to the appropriations at the time of issue to the ships, and no further financial control of material was exercised. After World War II, there was a brief return to stock funding consumables aboard the ships, but this practice was abolished again during the Korean War. It was decided that shipboard inventories of consumables and repair parts could be controlled by allowance lists and load lists. Those carried in the Navy Stock Account were charged to fleet operating funds at the time of transfer to the ships.

During this same period more and more items of a non-consumable nature were migrating to stock fund financing and finally in 1957, repair parts were capitalized into the Naval Stock Account. This practice also started a "squeeze" on the ships' operating funds that has grown progressively more severe over the years. As a result, inventories on tenders, repair ships,

and fleet issue ships could not be maintained at levels commensurate with need. To alleviate the pressure on operating funds, stock fund financing was extended to fleet issue ships in 1955, and to tenders and repair ships in 1959.

Today, the shortage of consumer funds has produced the same conditions in the combatant ships that led to the extension of stock funding to tenders, repair ships, and fleet issue ships. Shortages of repair parts, equipage, and consumable materials are endangering fleet readiness. There are a number of reasons for the shortage of consumer funds.

Under the present funding system, the ships pay for stock fund material when it is brought aboard, rather than when it is used. Items of inventory used but not replaced are not reflected in the accounting records and actual cost of maintenance and operation are understated. This understatement of true costs hurts future budget efforts.

Because of inadequate cost information and a lack of a planned maintenance program, fleet maintenance and operation budgets are submitted as estimates instead of planned programs. These estimates are difficult to support and defend and are subject to more critical review and budget cuts by higher reviewing authorities.

As the ships of the fleet become older, the failure rate of machinery and equipment increases and proportionately larger amounts of funds are required each year to maintain and operate them. The expanding technological advances in modern warfare have resulted in more costly and complex weapons and equipments being introduced to the fleet each year. The cost to maintain and operate a modern complex ship runs as high as eight times the cost to maintain and operate a World War II vessel of similar type. In the rush to get the latest equipment developments to the ships, equipment is placed aboard ship before it is fully checked out and de-bugged. All of these things bring about unpredictable increased funding requirements.

Several actions have been taken and/or proposed to overcome these funding difficulties. The Navy has published and is in the process of implementing revised criteria for the exclusion of certain items from stock fund financing. Liberal application of these criteria should significantly reduce the number of high cost items of unpredictable demand which the ships must pay for. This should, in turn, make the ships' funds requirements more stable and easier to forecast.

The standard maintenance management system to be installed beginning in July 1963, is expected to provide a firm basis for determining future maintenance requirements when fully implemented. However, the full advantages of the system will not be realized for several years. This system is also expected to provide the basis for developing more accurate and realistic allowance lists, which will, in turn, result in more realistic shipboard inventories. This system should in time, be an invaluable tool in reducing maintenance costs and in determining shipboard funding requirements, but it will not correct deficiencies in the funding system itself.

Of the three funding systems which have been proposed, two would retain the existing stock fund/consumer fund system, with modifications, and one would transfer the funding of repair parts and other combat materials to the appropriation/free issue system.

Extension of stock funding of inventories to combatant ships with central storerooms is a very controversial issue and has been argued pro and con for several years. Whether the advantages outweigh the disadvantages, or vice versa, seems to depend on which side of the fence the problem is viewed from.

From the viewpoint of the ships and fleet and type commanders this system would overcome many of the deficiencies of the present system. The ships would be able to carry on board the items needed to stay at sea.

Operating funds would not be tied up in inventories, and would not have to absorb losses due to obsolescence and excess stocks. The accounting system would more accurately reflect true costs of maintenance and operations and provide a better base for determining future requirements.

From the viewpoint of those responsible for managing the stock fund and maintaining adequate inventories to meet fleet requirements, the disadvantages clearly outweigh the advantages. The stock fund would have to absorb losses due to obsolescence and excess stocks. The current deficiencies in the ships' inventories would be filled at the expense of the stock fund, and seriously tax the capability of the fund to maintain adequate system inventories. In short, the existing shortage in funds would be transferred from the operating funds to the stock fund.

The appropriation/free issue system also has its advantages and disadvantages which tend to line up in somewhat the same manner. From a strictly funding angle, this system appears to solve fleet commander's problems. For items carried in the Appropriation Purchases Account, the fleet has no funding problems, and so long as adequate stocks can be maintained in the supply system, it has no material problems. This is where the disadvantages to this system occur. Because of the lack of financial constraint on requisitioning materials, the system is more vulnerable to abuses which create system stock shortages. Financial inventory accounting has been demonstrated to be less reliable under this system, and it does not provide as good financial control of inventories as does the stock fund.

The Department of Defense working group proposal would maintain the status quo as far as the funding system is concerned. The proposed stock fund criteria would have the effect of moving some of the troublesome items from stock fund financing to appropriation financing. It would not, however, be as effective in this respect as would the Navy's revised criteria. The advantages

to this system are clearly on the side of better supply management and financial control over inventories. It would not, however, materially alleviate the shortage of consumer funds in the fleet.

The principal problem the Navy faces today in funding shipboard inventories, the limitations on financial resources, is one which will never be completely solved. Financial resources will never be sufficient to meet the total stated requirements of the Navy. Thus the Navy must decide at what level of management to exercise these limitations in order to obtain maximum material readiness of the fleet, within the limits of the resources available.

The appropriation/free issue system removes the financial limitations from the fleet and places it on the inventory managers ashore. This system of financing is considered appropriate for insurance type items and other high cost items over which the ships cannot exercise some measure of control of usage. If the ships cannot control usage, limiting the funds with which to procure these items serves no economical purpose. It merely serves further to complicate the commanding officer's job. However, the lack of financial constraint on usage, lesser financial control over inventories, and the proven economies of stock fund financing make this system inappropriate for across-the-board financing of shipboard inventories.

The stock fund/consumer fund system extended only to the depot level, as proposed, by the Department of Defense and now in use, not only limits the funds for usage, but it also restricts the replacement of inventories used. This practice, in turn, distorts the true consumption costs and true material requirements and the fleet is unable to justify adequate budgets for consumer funds. The revised stock fund criteria will alleviate the funding limitations to some extent but it will not correct the basic deficiencies in the system, and is not, therefore, considered to be an acceptable solution to the problem.

The stock fund/consumer fund system extended to the shipboard level

will continue the limitation on funds for usage, but will remove the financial limitations on replacement of inventories. The allowance lists will serve as item limitations, but the ships can replace inventories as they are used. Stocks of material will be aboard ship where they are needed. More realistic consumption requirements and costs of maintenance and operation will be reflected in the official accounting records and reports. The supply system will obtain more accurate demand data on material requirements, and the fleet commanders will have more realistic cost data for budget purposes. This system will not eliminate the problem, but it will, it is believed, in conjunction with the other actions being taken, reduce it to a manageable size.

It is, therefore, recommended that:

1. Inventories in ships with central storerooms be converted into the Naval Stock Account at the earliest practicable date.

The above recommendation does not solve the problem for the ships without central storerooms. However, these ships have traditionally operated under different supply and accounting procedures. Implementation of the revised criteria for stock fund financing will reduce the value of inventories required aboard these ships to some extent. Alleviation of the funding problem for the other ships should also permit reassignment of sufficient funds to these ships to finance adequate inventory levels.

It is fully recognized that the above recommendation will add to the funding problem of the stock fund and that additional capital will be required. In fact, this is the basic reason for the objections to extending stock funding to the combatant ships, and it is a valid one. However, it is believed that the additional funds can be more readily justified as a stock fund requirement than as an operating requirement. Application of the revised stock fund criteria will transfer many of the slow moving, high cost, insurance items of unpredictable demand to appropriation funding and result in a better

turnover of stock fund inventories. Extension of stock fund reporting to the ships will also provide more accurate usage data on materials actually being consumed by the ships. This should assist stock fund and inventory managers in justifying future funds requirements and projecting system stock requirements. The data obtained from the Management Maintenance System and more accurate reporting of ships' usage should also assist in the preparation of more realistic allowance lists.

To offset the initial impact of extending stock funding to the combatant ships it is recommended that:

2. The value of materials required to bring ships' inventories up to allowance be separately accumulated and used to support a request for special apportionment of funds to the stock fund.

This recommendation, if successful, will only relieve the immediate impact of extending the stock fund to the shipboard level. In order to assure future success of this system it is imperative that the stock fund have sufficient resources to maintain adequate stock levels in the supply system. To provide the flexibility necessary to meet the changing demands of fleet requirements it is recommended that:

3. The Navy continue requesting, and the Department of Defense actively support such requests for, elimination of apportionment controls over stock funds. Such action is required to return the stock fund to a true revolving fund status.

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